

# RETAILER AND SUPPLIER COLLABORATION: AN APPLICATION OF DRAMA THEORY

YUANITA HANDAYATI, TOGAR M. SIMATUPANG

*School of Business and Management – Bandung Institute of Technology – Indonesia*

RAMASWAMI SRIDHARAN

*Newcastle Business School – The University of Newcastle - Australia*

## ABSTRACT

*Collaboration is a process in which several parties share knowledge and competence in order to make decisions and take actions that lead to performance improvements. However, conflicts amongst participants of collaboration often occur due to the different interests and perceptions. This study aims at analyzing the collaboration process among supply chain members, taking a case study of collaboration between Coca-Cola and Carrefour. Drama Theory is as a method in modeling, analysis, and understanding the strategic conflict. The results show that collaboration between Coca-Cola and Carrefour took place in two functions: marketing and supply chain. The former could be illustrated in three phases, which are, initiation phase, competition phase and collaboration phase in which Coca-Cola and Carrefour agreed to run promotion programs together and raised the trading term in the agreeable amount. The latter could be depicted in two phases, which are, operations phase and collaboration phase in which Coca-Cola agrees to improve the level of service to Carrefour. In return, Carrefour agrees to share information with Coca-Cola.*

**Keywords:** Supply Chain; Collaboration; Drama Theory; Coca-Cola; Carrefour

## INTRODUCTION

A supply chain consists of several members such as supplier, manufacturer, distributor and retailer that transform raw materials into products or services and then deliver them to consumers (Simchi-Levi *et al.*, 2007). There are often conflicting interests amongst the member of supply chain that prevent them from attaining better overall performance as each member acts based on its local perspective to achieve its own profit (Chopra and Meindl, 2007). The chain members need to collaborate in solving barriers to the improvement of overall performance. Collaboration can be seen as a recursive process where two or more members work together to achieve their common goals through sharing authority and responsibility for planning, implementation, and evaluation of this joint effort (Callioni and Billington, 2001). Each supply chain member is often assumed to discuss about their problems and find effective solutions without considering emotions of each member (Bryant, 1998). In fact, to solve differences in perspectives, each parties cannot only depend on rationality but also should consider the influence of emotions, hidden agenda, and irrationality (Bryant, 1997; Howard, 1999).

Lambert and Knemeyer (2004) are concerned about the importance of emotion when supply chain members interact each other to change their perspectives and give influence to others. Supply chain members can show positive emotion (empathy, enthusiasm, integrity, humility) or negative emotion (blaming, regret, anger, un-desire, hostility) as a strategy to know further and influence the preferences from the other supply chain members. A party is enabled to give threat to the other party, so that their messages can be delivered and generate negative emotion. Therefore, it is required a better understanding about involving emotions when supply chain members build collaborative efforts that lead to better profit to all members.

This research uses drama theory (Howard, 1996) to analyse a comprehensive picture of the conflict resolution process in supply chain collaboration. Drama theory is then used to describe emotion, caused

sudden change of the temporary frame of the conflict in a dynamic process. This research is based on a case study about the conflict resolution process between Coca-Cola as a supplier and Carrefour as its retailer that considers the existence of emotion and rational behavior. Interviews were used to learn about Coca-Cola and Carrefour behavior in the interaction, what kind of option, position from each party, to describe threats, and to define preference from each party. The analysis describes the supply chain interaction between these two supply chain members, conflicts that occur during their interaction, and solutions for both parties to eliminate dilemmas so that collaboration is achieved.

This paper is outlined into five sections, namely drama theory, research method, research findings, and conclusions. The first sections about drama theory is provided to briefly explain characteristics and procedures of both methods. Research method describes the research steps followed by the provision of research findings. The last part provides conclusion and suggestions for future research.

## **DRAMA THEORY**

In the human interaction, there is always a way to negotiate in order to have the best option that is profitable for everyone. Drama theory attempts to address problems that involve parties with different objectives. Problems can be found in our daily life such as in the individual relationships, negotiation among departments, and conflicts among organizations. Conflicts occurred between supply chain members can be described by drama theory. A framework involves the interaction between parties, option from each party, open position from each party, threatened future, and preference from each party about possibility of the interaction. Drama theory is used to analyze how a framework could be changed to the other framework in a series of episodes (Howard *et al.*, 1992). Framework changing takes place due to the presence of dilemmas. Dilemma occurs if there is a barrier to achieve an objective. The objective is reflected in the form of position (open future scenario) that tries to convince other parties to accept this position, with promise or threat if necessary.

Each supply chain member attempts to eliminate dilemma by involving emotion, either positive emotion or negative emotion, rational arguments, and changing of assumption or value. Positive emotion is used to convince other parties, that the party want to collaborate seriously. Negative emotion is used to convince other parties that he/she will implement the threatened future seriously. If a dilemma is eliminated, the retailer and the supplier will achieve resolution, either it is collaboration or tragedy.

Bryant (2003) argues that dilemmas can occur in a conflict situation. Dilemmas can be a barrier for resolution to collaboration. Dilemma in a conflict process can be divided into two groups:

### **1. Confrontation Dilemma**

Confrontation dilemma occurs when each party does not have common position (or, there is one party has a different position/cannot exchange with the other parties position), parties that have this kind of dilemma cannot convince their selves in applying their threat. Confrontation dilemma consists of:

- **Threat dilemma**

Party 1 faces threat dilemma to party 2 if party 2 assumes that the threatened future of party 1 is not credible, because party 2 realize that party 1 prefer other future scenario beside of party 2 position than the threatened future. Party 2 assumes that party 1 is bluffing. In this kind of condition, party 1 need to make their threat credible, with negative emotions such as anger or dislike.

- **Rejection Dilemma**

Party 1 faces rejection dilemma to party 2 if party 1 has barrier to convince other parties that party 1 serious to reject party 2 position because party 2 has doubt that party 1 prefer the threatened future than party 2 position. In this kind of condition, party 1 need to make their threatened future more credible with negative emotion.

- Positioning Dilemma

Party 1 faces positioning dilemma to party 2, if party 1 prefer party 2 position rather than his own position. It could be argued that the position held by the character is actually preferred to the other position, but for complex and subtle reasons.

- Persuasive Dilemma

Party 1 faces persuasive dilemma to party 2, if party 1 prefer party 2 position rather than threatened future, so that party 1 has a barrier to convince party 2 to accept party 1 position.

## 2. Collaboration Dilemma

If confrontation dilemma can be eliminated, parties that interact each other will have a common position, but they still can face the collaboration dilemma, they still have possibility to not trust others to the commitment of the common position.

- Trust Dilemma

Party 1 faces trust dilemma to party 2, if party 1 recognises that party 2 can gain an improvement by unilaterally moving from their agreed solution; in this condition party 1 can move to another position, or find a way to convince that party 2 will commit to the common position.

- Cooperation Dilemma

Party one faces cooperation dilemma to party 2, if party 1 is tempted to break the commitment, party 2 assume that is another choice that more interesting than the common position; if party 1 want to eliminate this dilemma, party 1 should move to another position, or convince party 2 that party 1 still commit to the common position.

## RESEARCH METHOD

A study case was used for examining the cooperation relationship between Coca-Cola as a supplier and Carrefour as a retailer (Bryant and Darwin, 2004). In this research, we would like to examine the collaboration process between Carrefour and Coca-Cola to enhance overall performance.

Coca-Cola Bottling Indonesia is a joint venture company, between local company (Bottling Independent Indonesia) with Coca-Cola producer and distributor (Coca Cola Amatil Limited). Coca-Cola produces and distributes its products to over 400.000 outlets, through over 120 pre-sellers. Coca-Cola has 10.000 employees to fulfill all of the orders from its customer. Coca-Cola has a head office in Pondok Indah, while it produces its product in Cibitung. Carrefour is an international supermarket, the 2<sup>nd</sup> biggest retailer in the world after Wal-Mart, and the biggest retailer in Indonesia. At present, Carrefour has over 60 stores in many cities in Indonesia; Jakarta, Bandung, Surabaya, Yogyakarta, Semarang, Medan, Palembang and Makasar, with 11.000 professional employees to serve their consumers. Carrefour is one of the retailers that have been served by Coca-Cola. Carrefour is the second customer in the world for Coca-Cola. While, for Carrefour Coca-Cola is the big five suppliers in the world for their store. In Indonesia, Carrefour is the number one customer for Coca-Cola. On the other hand, Coca-Cola is the best supplier for Carrefour, for its sales record.

Open ended interviews are used to capture qualitative data. This study obtain the data by interviewing Coca-Cola and Carrefour staffs, 2 staffs from Coca-Cola logistic division, 2 staffs from Coca-Cola marketing division, 3 staffs from Coca-Cola National Key Account Manager for Carrefour, 1 staff from Carrefour merchandise director, and 1 staff from Carrefour logistic division. We took two to three times interviews with the same person to have detail information. Individual interviews usually lasted between one to two hours. The former interviews were done to obtain an illustration about the relationship between Coca-Cola and Carrefour, including some options from both parties, conflict between them, how

they try to solve the conflict, and what kind of collaboration applied by Coca-Cola and Carrefour. The next interviews were done to build a common reference frame. We also did confirmatory interviews to Coca-Cola and Carrefour to have detail description about the stages of collaboration process with the options and threat from each party, so that each party had information about options offered by the other party.

Based on the interviews, we divided the marketing function into three phases of interaction. The first phase was started from 1998 until beginning of 2005. In this first phase, Coca-Cola and Carrefour began their relationship as a supplier and a retailer. Second phase began in the middle of 2005 until 2006 in which there were new competitors of Carrefour showed their existence. The existence of competitors became a catalyst for Carrefour to consider the cooperation process with Coca-Cola. The third phase began in 2007 until now, where Coca-Cola and Carrefour have shown their commitment to make a better supplier-retailer relationship. While in the supply chain function, the collaboration process can be divided into two phases. The first phase illustrates Coca-Cola and Carrefour cooperation phase after collaboration in the marketing function has been made. The second phase illustrates how Coca-Cola and Carrefour achieve the collaboration in the supply chain function.

We then asked the preference of each side and which priority they prefer: their own position, opposite position, or threatened future. There were several dilemmas come up in the collaboration process. Based on the interviews, we obtained the steps taken by both sides to overcome the dilemma and their further expectations to obtain a better collaboration between them. Once we obtained the description of options from both and ordinal preferences about the sequence of present option combination, we identified the individual stability and the balance of the interaction. We were able to find the optimum option combination that shows us a balance position of each side. Therefore, no position movement took place from the involved parties.

When applying drama theory, we obtained some options from Coca-Cola and Carrefour then informed the present options to both parties. Coca-Cola and Carrefour were then asked to decide their position and state the threatened future of both. This step gave us the collective reference framework. This collective reference framework was revealed to Coca-Cola and Carrefour to determine the preference about the position and threatened future of both sides. From this preference, we could see whether the dilemmas occur. If there is no dilemma, then we will obtain the resolution of the conflict. If there is a dilemma, we modify the model to review the interaction of both and make the new framework till the dilemma resolved.

## **RESEARCH FINDINGS**

The collaboration process between Coca-Cola and Carrefour was divided in two parts: collaboration in the marketing function, then collaboration in the supply chain function.

### *1. Collaboration on the marketing function*

The collaboration process between Coca-Cola and Carrefour was analyzed using drama theory to give a comprehensive description from collaboration process. Based on the historical relationship between Coca-Cola and Carrefour, the collaboration process in the marketing function using drama theory is divided into three phases.

#### *1.1. Phase #1 (1998 – the beginning of 2005)*

At the beginning, Coca-Cola and Carrefour had a deal as a supplier and a retailer. Coca-Cola offered a promotion program to Carrefour to increase the amount of product sale. Carrefour responded the offer, but they did not reach any agreement for the trading term or the compensation of Coca-Cola for Carrefour. Coca-Cola considered that the compensation requested by Carrefour were too expensive. This

was the main constraint for Coca-Cola to impose their promotion program, and at last this program was cancelled for 1998 – 2005 period. This refusal made the collaboration between Coca-Cola and Carrefour were not achieved. It means their cooperation only in terms of the order and delivery cycle of Coca-Cola product. They did not yet have any desire to further develop their relationship. The conflict condition in the first phase between Coca-Cola and Carrefour is described in Figure 1 based on the format of Bryant (2003).

	C2	t	C
Coca-Cola			⇒
execute the promotion program with Carrefour	■	—	■
stop the supply to Carrefour	□	◆?	□
Carrefour	→		
increase the trading term in a huge amount	□	—	■

Figure 1. Conflict situation using Confrontation Manager software

#### Explanation of collective reference framework

Based on the description of conflict condition using software Confrontation Manager (CM), we obtained the matrix above (see Figure 1). The left side of the matrix shows the parties who are involved in the conflict condition, and each party has their written option exactly under their name. From Figure 1, Coca-Cola has a choice to execute the promotion program with Carrefour and Carrefour has choice to increase the trading term in a huge amount.

The matrix column in Figure 1 shows various possible scenario on the interaction between the parties, consists of the position offered by each party (according to the stand of their names from Figure 1, column C2 represents the position of Coca-Cola, while column C represents the position of Carrefour). A position is based on a scenario offered by a party to another party which is opened up that all the parties are able to know the offering. A position can be called as the alternative combination of acceptance, refusal, or abstain to the options of each party. For the example, the position of Coca-Cola above can be read as refusal (mark with unshed curve) for the offering option of Carrefour, which is increasing the trading term in a huge amount. Therefore, the short line (—), unshed curve (□ or ◇), shaded curve (■ or ◆) in sequence represent abstain, refusal, and acceptance. The □/■ represents position of each party. Besides, there also scenario *t* which is threatened future, that represented by ◆/◇, and “?” represents doubt. In Figure 1, scenario *t* shows the threatened future Coca-Cola for Carrefour, which is, Coca-Cola will stop the supply to Carrefour.

### The explanation of involved parties, including the options

1. Coca-Cola (C2, as the supplier)  
Having choice to execute their promotion program with Carrefour and stop their supply to Carrefour
2. Carrefour (C, as the retailer)  
Having choice to increase the trading term in a huge amount

### Preference explanation

Each party will be asked to compare scenario with threatened future. In Figure 1, the arrow in every row shows the preference of the party to  $t$  than the scenario at that arrow column. For example, the arrow in Coca-Cola's side and Column C mean that Coca-Cola prefers Carrefour position to threatened future (because the arrow keep away from  $t$ ). The arrow with two directions means that the party is indifferent to the scenario in arrowed column and as the threatened future  $t$ .

### Position Explanation of Each Party

1. Coca-Cola  
Coca-Cola would execute the promotion program with Carrefour and would not stop the supply to Carrefour if Carrefour did not propose to increase the trading term in a huge amount.
2. Carrefour  
Carrefour expected that Coca-Cola would execute the promotion program with Carrefour. Carrefour did not wish Coca-Cola to stop the supply to Carrefour. Carrefour also would propose to increase the trading term in a huge amount.

### Explanation of threatened future

Threatened future will be realized if both of them (Coca-Cola and Carrefour) carry out their threat. The threatened for the above case is Coca-Cola will stop their supply to Carrefour.

The first phase also identified the threat dilemma of Coca-Cola to Carrefour. This dilemma came up because Carrefour believed that Coca-Cola would not carry out its threat.

### Dilemma Analysis

By considering the collective reference framework which describes option, threatened future and preference of Coca-Cola and Carrefour above, it was found that the only party with dilemmas was Coca-Cola. The dilemmas were:

1. Persuasive dilemma  
Coca-Cola faced persuasive dilemma because Carrefour preferred to choose the threatened future of Coca-Cola to its position. In this case, Coca-Cola needed to give more understanding to invite and ensures Carrefour that the position it had been offered have a better impact than its threatened future.
2. Rejection dilemma  
Coca-Cola faced rejection dilemma because their refusal to Carrefour was not responded seriously. This was because Carrefour realized that Coca-Cola preferred the position of Carrefour to impose their threatened future.
3. Threat dilemma

Coca-Cola faced threat dilemma because Carrefour thought that Coca-Cola would not impose its threatened future. Carrefour believed that there were no other competitors who had high traffic demand, so that the Coca-Cola's threat was considered as the loss for Coca-Cola itself in this phase.

### *1.2. Phase #2 (in the middle of 2005 – 2006)*

In this second phase, there were some new competitors of Carrefour who had showed their existence. The competition with Hypermart, Giant and other minimarkets such as Indomaret, Alfamart and Circle K was getting strong with the same bargaining power. Even, some of their products were cheaper than offered by Carrefour. They also often had bigger turnover compared to Carrefour. The appearance of other competitors became a catalyst for Carrefour to consider the cooperation process with their suppliers. This condition also had changed the position of Carrefour in the cooperation with Coca-Cola. Carrefour realized that Coca-Cola developed their business with other parties, not only with Carrefour. This kind of condition had changed its principle.

Carrefour decided to increase the trading term with Coca-Cola, but with a lower term. At the first negotiation process, Carrefour did not concern about Coca-Cola's offering. But, after the competitors came up, Carrefour was concerned with Coca-Cola's offering about the trading term. They finally reached the agreement about the trading term. Coca-Cola decided to give the additional trading term for Carrefour, because they saw business growth in Carrefour. Coca-Cola also did not impose its threatened future to Carrefour, although it was serious in the Carrefour's eyes.

As a result, Carrefour got better profit from the promotion program with Coca-Cola. The traffic in Carrefour increased with more customers came to them. The customers were not only buying the products of Coca-Cola, but also the other products. At the other side, Coca-Cola also felt the same because of the increasing of their product sales. Then, Carrefour wished that Coca-Cola would not stop its promotion program because the profit it gained. In this condition, Carrefour was afraid if Coca-Cola stopped its promotion program or decreased the trading term with the assumption that sooner or later Coca-Cola would know the increasing profit gained by Carrefour. Therefore, Carrefour seriously responded about the threatened future of Coca-Cola. Carrefour then changed its preference and chose the position of Coca-Cola than its own position. The confrontation phase which was started by the confrontation dilemma felt by Coca-Cola (rejection, persuasive, and threat) could be eliminated. Then, Coca-Cola and Carrefour entered the collaboration phase. Figure 2 shows the formation of the collective reference framework.

### Analysis of Dilemma

#### 1. Coca-Cola

At this phase, confrontation dilemma faced by Coca Cola was eliminated. However, Coca Cola still faced cooperation dilemma. Carrefour felt hesitant that Coca-Cola would be committed to its promotion program with Carrefour based on the agreement. As described before, Carrefour wished that Coca-Cola would not stop their promotion program because the profit they gained. In this condition, Carrefour was afraid if Coca-Cola stops its promotion program or decreases the trading term with the assumption that sooner or later Coca-Cola would know the increasing profit gained by Carrefour.

#### 2. Carrefour

Carrefour faced trust dilemma to Coca-Cola, because Carrefour recognized that Coca Cola would not be committed with executing the promotion program with Carrefour. Carrefour identified that Coca Cola could gain an improvement by giving its promotion program to Carrefour's competitors.

	C2	t	C
<b>Coca-Cola</b>			
execute the promotion program with Carrefour	?	—	?
<b>Carrefour</b>			
increase the trading term in a huge amount		—	

Figure 2. Coca-Cola and Carrefour situation in 2<sup>nd</sup> phase

### 1.3. Phase #3 (2007 – now)

At this phase, Coca-Cola and Carrefour has shown their aims to shape a better cooperation. Carrefour had anticipated if Coca-Cola stopped its promotion program. Carrefour then invited Coca-Cola to hold “top to top” meeting in 2007 in order to have a better relationship between them through Memorandum of Understanding (MOU) as a commitment to develop their business together. This phase showed the realization of their commitment. At this third phase, there was no more threat from both sides as they formed the collective reference framework. This means that no more dilemma for Coca-Cola or Carrefour. There is no party that tries to threaten the other parties which indicate that all the parties have no dilemma.

	C2	t	C
<b>Coca-Cola</b>			
execute the promotion program with Carrefour		—	
<b>Carrefour</b>			
increase the trading term in a huge amount		—	

Figure 3. Coca-Cola and Carrefour situation in the 3<sup>rd</sup> phase



## Analysis of Dilemma

At this phase, Coca-Cola has succeeded in ensuring Carrefour about their commitment to the MOU which has been agreed by them. In the other side, Carrefour also has been eliminated their hesitant into Coca-Cola's commitment in the implementation of their promotion program. Therefore, both of them were successful in eliminating their dilemma and reaching the collaboration step.

### *2. Collaboration on the supply chain function*

The collaboration process of supply chain function using drama theory is divided into two phases based on the historical cooperation between Coca-Cola and Carrefour.

Coca-Cola and Carrefour firstly were concerned about the collaboration in the marketing function. After this collaboration had been made, the outcome of this marketing collaboration had influenced the supply chain function. Coca-Cola and Carrefour started to concern about their supply chain process. There was no confrontation dilemma in their supply chain function. It means no more conflict condition between Coca-Cola and Carrefour in their supply chain function. Coca-Cola and Carrefour should try to collaborate in their supply chain process, as the statement of Carrefour that there is no collaboration yet in the supply chain function to determine the most effective way in distributing Coca-Cola's products. Carrefour already held collaboration in supply chain with the other suppliers. Carrefour realized that Coca-Cola was willing to collaborate with Carrefour. Therefore, there was an opportunity to implement supply chain collaboration between Coca-Cola and Carrefour. Coca-Cola and Carrefour had the same concern about the cost of overall supply chain process. Although the overall cost was charged to the consumers, Carrefour was suffered bigger impact for the higher prices passing on to the consumers.

#### *2.1. Relationship on the supply chain function at the first phase*

The Carrefour expectation to Coca-Cola was stated by Carrefour logistic division staff as *"well, for the supply chain... we need a better service level. And you have a good work for the jump demand."* Customer service level of Coca-Cola to Carrefour is measured using a set of indicators, namely the variable of delivery whether Coca-Cola can fulfill Carrefour order or not, variable of on time measures if Coca-Cola can fulfill Carrefour order in the exact time or not, variable of accurate measures if Coca-Cola can fulfill each of Carrefour order in the exact amount for each Stock Keeping Unit (SKU), the other variable is invoice that measure if Coca-Cola already set the exact number of order with the price that already decided, and also mention the marketing program that will be held in the following time. Carrefour expects Coca-Cola to improve its customer service level. On the other hand, to get a better customer service level, Coca-Cola asks Carrefour not to make an unexpected order.

While, the expectations of Coca-Cola to Carrefour are stated by Coca-Cola logistic division staff as follows. Coca-Cola expects the improvement in demand forecasting accuracy of Carrefour. It will be better if Carrefour makes a joint forecast with Coca-Cola. Therefore, Coca-Cola needs sale data of Carrefour to reduce the inventory using the forecast of customer demand. From the expectation above, then the collective reference framework is described in Figure 4.

## Analysis of Dilemma

### *1. Coca-Cola*

Coca-Cola faces trust dilemma because Coca-Cola recognizes that Carrefour will not share the information about customer demand and promotion program that Coca-Cola need, because Coca-Cola realizes that those information are confidential for Carrefour. Besides, Coca-Cola already had a bad experience that Carrefour often held promotion program without give any information to Coca-Cola first, and it can cause inventory problem for Coca-Cola because of the unexpected order. Coca-Cola also faces cooperation dilemma because Carrefour is hesitant that Coca-Cola will commit to their position in

increasing their customer service level. Carrefour is hesitant also that Coca-Cola will give away the information to their competitors (including information about Carrefour promotion program).

## 2. Carrefour

Carrefour faces trust dilemma to Coca-Cola because Carrefour recognizes that maybe Coca-Cola will not commit to their position in increasing their customer service level. Carrefour realizes also that Coca-Cola will share the information to their competitors, including information about Carrefour promotion program. Carrefour also faces cooperation dilemma because Coca-Cola is hesitant that Carrefour will share the information about customer demand and promotion program when Coca-Cola improves its customer service level to Carrefour.

	C2	t	C
Coca-Cola			
increase the customer service level for Carrefour	?	—	?
Carrefour			
sharing information	?	—	?

Figure 4. Coca-Cola and Carrefour situation for supply chain at the 1<sup>st</sup> phase

### 2.2. The relationship between Coca-Cola and Carrefour on the supply chain function at the second phase

Knowing each other business is important thing to create collaboration. After the collaboration on the marketing function, Coca-Cola and Carrefour have known each other interests. However, in the supply chain function they have not known each other. To understand the interests of both parties, Coca-Cola and Carrefour should make a collaboration roadmap for their supply chain. They should have a same point of view about supply chain collaboration model that will be implemented. Coca-Cola can eliminate trust dilemma of Carrefour by showing them the real implementation about the improvement of customer service level. Then, by that action, Carrefour believes that Coca-Cola will commit in giving a better customer service level if Carrefour share their information to Coca-Cola.

Based on the interviews, Coca-Cola mentioned that to fulfill Carrefour order they will use air planes so that Carrefour will receive the order as soon as possible. It means that Coca-Cola should spend higher cost for the transportation cost. From the statement we can conclude that Coca-Cola will make Carrefour believe that Coca-Cola really wants to have collaboration on the supply chain function with Carrefour, and Carrefour will convince itself to collaborate with Coca-Cola. The trust dilemma faces by Coca-Cola can be eliminated because Carrefour realizes about the profit they will gain if they share the information to Coca-Cola. On the other hand, Carrefour cooperation dilemma to Coca-Cola can be eliminated also by ensuring them about the advantageous of sharing information with Coca-Cola, including the improvement

of customer service level. Then, the collective reference framework is described in Figure 5. Both Coca-Cola and Carrefour can implement their commitment in optimizing their supply chain by decreasing the total cost of their supply chain. This commitment can be clarified by devising a Memorandum of Understanding between Coca-Cola and Carrefour.

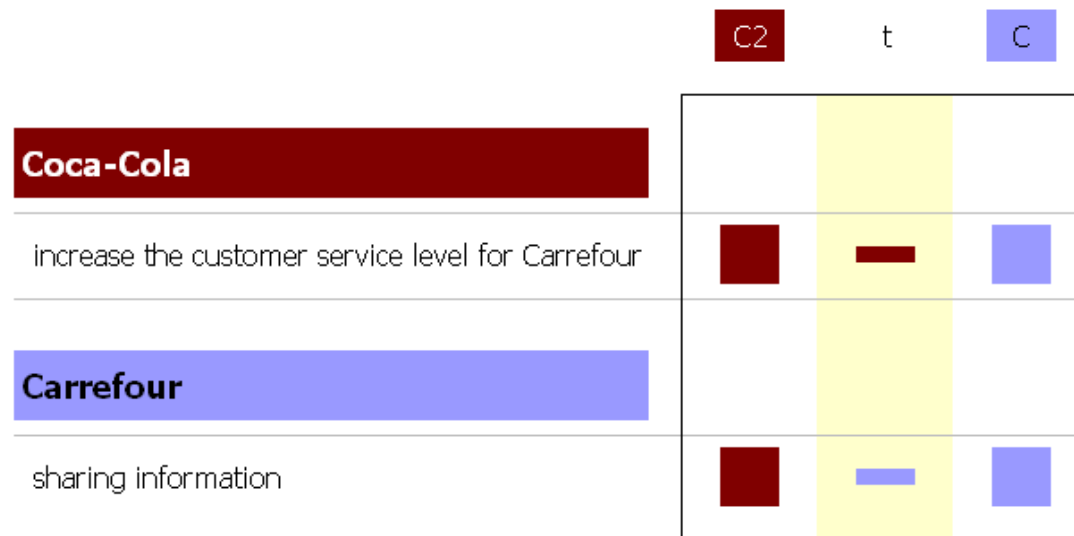


Figure 5. Coca-Cola and Carrefour situation in supply chain at the 2<sup>nd</sup> phase

Supply chain collaboration between Coca-Cola and Carrefour can take place because each party tries to contribute in making a better supply chain system. The role of Carrefour in this collaboration is in information sharing about consumer demand and promotion program. Those data assists Coca-Cola with their decision making process. Information sharing facilitates the elements of supply chain in catching, saving and giving information for effective decision making (Simatupang and Sridharan, 2008). The improvement process is used to improve customer service level. This customer service level can be measured based on: information delivery (The information delivery related with the match of order from Carrefour with the supply from Coca-Cola. It concerns more on how many percent Coca-Cola can fulfill Carrefour.), time delivery accuracy (Carrefour has time deadline to fulfill their order. Coca-Cola cannot deliver any product out of time deadline.), and accuracy of invoice (There are some invoice mistakes often happen between Carrefour and the system of Coca-Cola. The problem usually occurs because of the incorrect price.). The customer service level can be used to define the information needed for improving the services. The proposed roles of Coca-Cola and Carrefour to optimize the supply chain are shown in Table 1.

To improve the work of supply chain between Coca-Cola and Carrefour can be done by arranging their supply chain strategy. They also need to concern about the needed, capacity and characteristic of each other to overcome the inventory problem in the supply chain.

Table 1. Coca-Cola and Carrefour Roles in the Supply Chain Improvement

	Coca-Cola	Carrefour
Information Sharing		Carrefour has a role in sharing the information about demand data, and promotion program
Decision Making	<ul style="list-style-type: none"> <li>- Coca-Cola and Carrefour apply a routine meeting to discuss about the next strategic steps</li> <li>- Coca-Cola and Carrefour make a review for customer service level performance</li> </ul>	
Improvement Process	Several alternatives that can be done by Coca-Cola and Carrefour are loading system design at Carrefour store, so that Coca-Cola truck will not waiting at the Carrefour parking lot and it can cause lost sales, design the flexible shipping time to avoid traffic jam, maximize transportation to distribute product from manufacturer to the store and then go back to the manufacturer.	
Customer Service Level Performance	After the information about customer demand and promotion program that will be held by Carrefour is obtained, Coca-Cola has a responsibility to use the information to increase the customer service level	

## CONCLUSIONS

The collaboration between Coca-Cola and Carrefour had taken place on two functions, which are marketing and supply chain. The marketing collaboration process between them was divided into three phases. In the first phase (1998- the beginning of 2005), Coca-Cola and Carrefour could not reach an agreement for the trading term of Coca-Cola to Carrefour, and Coca-Cola faced persuasive, rejection, and threat dilemma. In the second phase (in the middle of 2005-2006) there were some new Carrefour competitors who have showed their existence, and it makes Carrefour realized that Coca-Cola can developed their business with other parties, not only with Carrefour. For this condition, Coca-Cola faced cooperation dilemma and Carrefour faced trust dilemma. In the third phase (2007-now) all of the dilemmas had been eliminated, because Coca-Cola and Carrefour had shown their aims to shape a better cooperation. While the supply chain collaboration was divided in two phases. In the first phase, Carrefour expects Coca-Cola to increase its customer service level to Carrefour and Coca-Cola expects Carrefour to share the data, with this condition Coca-Cola faces trust dilemma, while Carrefour faces trust dilemma. In the second phase, Coca-Cola and Carrefour already known each other interests and will convince other to collaborate, and all of the dilemmas will be eliminated. The outcome of the marketing collaboration has influenced both parties to start concerning about their supply chain process. It means that no more conflict

between Coca-Cola and Carrefour in their supply chain collaboration. Therefore, there is an opportunity to implement supply chain collaboration between Coca-Cola and Carrefour.

This research suggests Coca-Cola and Carrefour to concern about emotional involvement in the interaction between them. Supply chain collaboration is needed to optimize the overall process to get the optimum gain for both of them. Coca-Cola and Carrefour need to understand about their own role and responsibility in improving their shared supply chain. Further research about marketing and supply chain collaboration in any other cases can be extended based on the outline given in this research including collaboration among all members of a supply chain to have better understanding about the dynamics of collaboration.

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